

Set	Items	Description
S1	3637754	TEMPLAT? OR FORM OR FORMS OR FORMAT? OR CHART? OR GRAPH? OR PATTERN?
S2	101263	DNA OR RNA OR CDNA OR MRNA OR (NUCLEOTIDE? OR BASE OR GENETIC? OR AMINO()ACID? OR PROTEIN? OR GENE) ()SEQUENC?
S3	124909	PROBE? OR PROBEARRAY?
S4	206480	IDENTIFIER? OR ID OR DATA()STRUCTUR? OR LABEL? OR TAG OR TAGGED OR TAGGING OR TAGS OR FLAGS OR FLAGGING OR FLAGGED
S5	413994	RADIOACTIV? OR ISOTOP? OR ION? ?
S6	155014	DATABASE? OR DATABANK? OR DATAMIN? OR DATA() (BASE? OR BANK? OR MINE? OR MINING OR VALUE?) OR DB OR RDB? OR DBMS? OR OODB?
S7	9259	S1 AND S2 AND S3
S8	153	S1 AND S2 AND S4 AND S5 AND S6
S9	89	S7 AND S8
S10	9	S1(5N)S3 AND S9
S11	0	S10 AND IC=G06F-012?
S12	0	S9 AND IC=G06F-012?
S13	15	S1(10N)S3(10N)S6
S14	0	S9 AND S13
S15	271	S7 AND (S1 OR S4) (3N)S6
S16	4	S15 AND IC=G06F?
S17	27	S10 OR S13 OR S16
S18	27	IDPAT (sorted in duplicate/non-duplicate order)
S19	27	IDPAT (primary/non-duplicate records only)

File 347:JAPIO Nov 1976-2003/Nov(Updated 040308)

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File 350:Derwent WPIX 1963-2004/UD,UM &UP=200419

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19/5/3 (Item 3 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
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014979109 \*\*Image available\*\*  
WPI Acc No: 2003-039623/200303  
XRAM Acc No: C03-009348  
XRPX Acc No: N03-030985

**Data manager for biological applications, organizes selective synthesized and spotted probe array results according to integrated database schema and publishes in relational database**

Patent Assignee: AFFYMETRIX INC (AFFY-N)  
Inventor: BERNHART D; JEVONS L; SHEPPY C G  
Number of Countries: 001 Number of Patents: 001  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020128993	A1	20020912	US 2001274988	A	20010312	200303 B
			US 2002683982	A	20020308	

Priority Applications (No Type Date): US 2001274988 P 20010312; US 2002683982 A 20020308

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20020128993	A1	26	G06F-007/00	Provisional application US 2001274988

Abstract (Basic): US 20020128993 A1

NOVELTY - A data manager, where a data identifier (630) identifies set of synthesized **probe** array results and spotted **probe** array results to be published in a relational **database** (418) based on a user selection, is new. A **formatter** (640) organizes the synthesized and spotted **probe** array results according to an integrated **database** schema e.g. Affymetrix (RTM) analysis data model (AADM) schema and publishes the results in the database.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) relational database provision method;
- (2) graphical user interface display method;
- (3) graphical user interface;
- (4) computer program product comprising rotational database provision instructions; and
- (5) computer system.

USE - For managing synthesized and spotted probe array results of biological molecules such as cells, proteins, genes or expressed sequence tags (EST), DNA sequences and other molecules such as ligand, receptor, peptide, polysaccharides, nucleic acids.

ADVANTAGE - Facilitates accessing, analyzing and managing vast amount of biological information collected using probe arrays.

DESCRIPTION OF DRAWING(S) - The drawing shows the functional block diagram of a data manager application.

Relational database (418)

Data identifier (630)

Formatter (640).

pp; 26 DwgNo 6/11

Title Terms: DATA; MANAGE; BIOLOGICAL; APPLY; ORGANISE; SELECT; SYNTHESIS; SPOT; PROBE; ARRAY; RESULT; ACCORD; INTEGRATE; DATABASE; RELATED; DATABASE

Derwent Class: B04; D16; T01

International Patent Class (Main): G06F-007/00

File Segment: CPI; EPI

19/5/4 (Item 4 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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014798254

WPI Acc No: 2002-618960/200266

Related WPI Acc No: 1997-145245; 1997-319766; 1998-101069; 1998-609243;

1999-095351; 1999-263358; 1999-313351; 2000-524416; 2000-587434;  
2000-594650; 2001-050094; 2001-146289; 2001-367710; 2002-017124;  
2002-017125; 2002-017215; 2002-083006; 2002-164363; 2002-194904;  
2002-340184; 2002-393965; 2003-066892; 2003-120675; 2003-182286;  
2003-182497; 2003-416594; 2003-521577; 2003-556799; 2003-584406;  
2003-669615; 2004-021946; 2004-088750; 2004-142653; 2004-168886

XRAM Acc No: C02-174721

**Producing improved organism having a desirable trait, involves generating a set of mutagenized organisms so that a set of substantial genetic mutations is represented and detecting presence of improved organism**

Patent Assignee: DIVERSA CORP (DIVE-N)

Inventor: FU P; LATTERICH M; LEVIN M; SHORT J M; WEI J

Number of Countries: 097 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200229032	A2	20020411	WO 2001US31004	A	20011001	200266 B
AU 200211402	A	20020415	AU 200211402	A	20011001	200266

Priority Applications (No Type Date): WO 2001US19367 A 20010614; US

2000677584 A 20000930; US 2001279702 P 20010328

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 200229032	A2	E	868	C12N-015/00	
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Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA  
CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN  
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ  
PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW  
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200211402	A			C12N-015/00	Based on patent WO 200229032
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Abstract (Basic): WO 200229032 A2

NOVELTY - Producing (M1) an improved organism having a desirable trait, comprising obtaining an initial population of organisms, generating a set of mutagenized organisms, so that when all the genetic mutations in the set of mutagenized organisms are taken as a whole, there is represented a set of substantial genetic mutations, and detecting the presence of the improved organism, is new.

DETAILED DESCRIPTION - Producing (M1) an improved organism having a desirable trait, comprising obtaining an initial population of organisms, generating a set of mutagenized organisms, so that when all the genetic mutations in the set of mutagenized organisms are taken as a whole, there is represented a set of substantial genetic mutations, and detecting the presence of the improved organism, is new. Alternatively, M1 involves functionally knocking out an endogenous gene in a clonal population of organisms, transferring a library of altered genes into the clonal population of organism, where each altered gene differs from the endogenous gene at only one codon, detecting a mutagenized organism having an improved trait, and determining the nucleotide sequence of a gene that has been transferred into the detected organism.

INDEPENDENT CLAIMS are also included for the following:

(1) identifying (M2) proteins by differential labeling of peptides, comprising:

- providing a polypeptide sample;
- providing labeling reagents which differ in molecular mass that can generate differential labeled peptides that do not differ in chromatographic retention properties and do not differ in ionization and detection properties in mass spectrographic analysis, the differences are distinguishable by mass spectrographic analysis;
- fragmenting the polypeptides;
- contacting the labeling reagents with the fragments;
- separating the peptides by chromatography to produce an eluate;

(f) feeding the eluate into a mass spectrometer and quantifying the amount of each peptide and generating the sequence of each peptide using the mass spectrometer; and

(g) inputting the sequence to a computer program which compares the inputted sequence to a **database** of polypeptide sequences to identify the polypeptide from which the sequence peptide originated;

(2) a chimeric **labeling** reagent (I) comprising, a first domain comprising a biotin, and a second domain comprising a reactive group capable of covalently binding to an amino acid, where the reagent comprises at least one **isotope** ;

(3) comparing relative protein concentrations in a sample;

(4) identifying a gene that alters a trait of an organism;

(5) introducing differentially activatable staged traits into a transgenic cell or organism; and

(6) whole cell engineering of new or modified phenotypes by using real time metabolic flux analysis.

USE - M1 is useful for producing an improved organism having a desirable trait. M2 is useful for defining the expressed proteins associated with a given cellular state, and quantifying changes in protein expression between at least two cellular states (claimed). M2 is also useful for simultaneously identifying individual proteins in complex mixtures of biological molecules. The methods are useful in functional genomic studies, and for conferring disease-resistant traits and traits other than disease resistance in plants.

pp; 868 DwgNo 0/28

Title Terms: PRODUCE; IMPROVE; ORGANISM; TRAIT; GENERATE; SET; ORGANISM; SO  
; SET; SUBSTANTIAL; GENETIC; REPRESENT; DETECT; PRESENCE; IMPROVE;  
ORGANISM

Derwent Class: B04; D16; K08

International Patent Class (Main): C12N-015/00

File Segment: CPI

19/5/6 (Item 6 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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014334081 \*\*Image available\*\*  
WPI Acc No: 2002-154784/200220  
Related WPI Acc No: 2002-164555  
XRPX Acc No: N02-117659

Web-based electronic purchase method for scientific products e.g.  
beakers, involves searching database to find desired product for customer  
and supplying web-based requisition form to customer

Patent Assignee: FISHER SCI CO (FISH-N)  
Inventor: MOMYER D; TALHOUK D K  
Number of Countries: 094 Number of Patents: 002  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200203165	A2	20020110	WO 2001US20653	A	20010628	200220 B
AU 200188216	A	20020114	AU 200188216	A	20010628	200237

Priority Applications (No Type Date): US 2000677349 A 20001002; US  
2000608924 A 20000703

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
WO 200203165	A2	E	92 G06F-000/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA  
CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS  
JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL  
PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200188216 A G06F-000/00 Based on patent WO 200203165

Abstract (Basic): WO 200203165 A2

NOVELTY - A customer profile associated with several customers and  
a database of items offered by the suppliers are maintained. The  
database is searched on behalf of a customer to find a desired item. A  
web-based requisition form is provided to the customer.

USE - For purchasing scientific products such as beakers, flasks,  
chemicals, etc., other products such as dye oligonucleotide, GAPDH  
primers, oligo probes, molecular beacons probes. Also for locating  
appropriate bacterial and human DNA for medical research, through  
public or private internet, intranet, using personal computer, PDA,  
web-based pager.

ADVANTAGE - The purchase of various products is managed reliably by  
sending web-based requisition form due to database search, hence  
customer can acquire real-time product information efficiently.

DESCRIPTION OF DRAWING(S) - The figure shows the schematic view of  
the electronic purchase system.

pp; 92 DwgNo 1/14

Title Terms: WEB; BASED; ELECTRONIC; PURCHASE; METHOD; SCIENCE; PRODUCT;  
BEAKER; SEARCH; DATABASE; FINDER; PRODUCT; CUSTOMER; SUPPLY; WEB; BASED;  
FORM; CUSTOMER

Derwent Class: T01

International Patent Class (Main): G06F-000/00

File Segment: EPI

19/5/9 (Item 9 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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013998754 \*\*Image available\*\*  
WPI Acc No: 2001-482969/200152  
XRAM Acc No: C01-144699  
XRPX Acc No: N01-357559

Preparing a cell array for use in drug screening, disease diagnosis,  
phylogenetic classification, parental, forensic identification, by  
generating multiple tubes having cells of specific type immobilized  
within lumen

Patent Assignee: BIOMOSAIC SYSTEMS INC (BIOM-N); LI R (LIRR-I); MATHER J P  
(MATH-I)

Inventor: LI R; MATHER J P

Number of Countries: 024 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200143869	A2	20010621	WO 2000US34010	A	20001215	200152 B
AU 200121035	A	20010625	AU 200121035	A	20001215	200162
US 6406840	B1	20020618	US 99466011	A	19991217	200244
EP 1239950	A2	20020918	EP 2000984413	A	20001215	200269
			WO 2000US34010	A	20001215	
US 20020197656	A1	20021226	US 99466011	A	19991217	200304
			US 2001947238	A	20010905	
			US 2002192273	A	20020709	
JP 2003516747	W	20030520	WO 2000US34010	A	20001215	200334
			JP 2001544993	A	20001215	

Priority Applications (No Type Date): US 99466011 A 19991217

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
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WO 200143869	A2 E	54	B01J-019/00	
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Designated States (National): AU CA JP

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU  
MC NL PT SE TR

AU 200121035	A		B01J-019/00	Based on patent WO 200143869
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US 6406840	B1		C12N-005/02	
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EP 1239950	A2 E		B01J-019/00	Based on patent WO 200143869
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Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI

LU MC NL PT SE TR

US 20020197656	A1		G01N-033/567	CIP of application US 99466011 Div ex application US 2001947238 CIP of patent US 6406840
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JP 2003516747	W		71 C12N-011/04	Based on patent WO 200143869
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Abstract (Basic): WO 200143869 A2

NOVELTY - Preparing (I) a cell array, comprises providing an array of tubes, each tube having at least one lumen and a population of cells that is contained within the lumen, cross-sectioning the array of tubes to yield several transverse tube segments and immobilizing the tube segments on a solid support.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a tube (II) having a maximum length of 0.01 microns-5 mm and having a lumen and a population of cells that is contained and immobilized within the lumen;

(2) a cell array (III) comprising several tubes (II);

(3) a kit for simultaneously detecting the presence of a target polynucleotide or polypeptide in different cell types comprising (III) in suitable packaging;

(4) a computer-based system for detecting differential expression of a target polynucleotide or protein in a number of cell types derived from at least two subjects, which is indicated by difference in hybridization patterns on the cell array in case of polynucleotide or by immunostaining patterns for proteins, comprising:

(a) a data storage device comprising a reference and a test hybridization or immunostaining pattern generated by hybridizing a labeled nucleotide probe corresponding to the target polynucleotide

to (III) or by staining (III) with a **labeled** antibody specific for target, where (III) comprises several tubes containing different cell types of a reference or test subject;

(b) a search device for comparing the **pattern** to a reference **pattern** of the data storage device to detect the differences in the **patterns** ; and

(c) a retrieval device for obtaining the differences in **patterns** ; and

(5) a computer-implemented method for detecting differential expression of a target protein or polynucleotide in a number of cell types, indicated by the differences in immunostaining or hybridization **patterns** , by:

(a) providing a **database** comprising immunostaining or hybridization **patterns** that represent expression **patterns** of the target protein or polynucleotide in a number of cell types, where immunostaining **pattern** is generated by staining (III) with a **labeled** antibody that is specific for the target or hybridization **pattern** generated by hybridizing (III) with a **labeled** nucleotide **probe** , where the staining or hybridization yields detectable complexes with different levels of staining or hybridization intensities;

(b) receiving two or more **patterns** for comparison; and

(c) determining the differences in the selected **patterns** and displaying the results of the determination.

USE - The cell array is useful for simultaneously detecting the presence of a specific protein-protein interaction involving a proteinaceous **probe** , such as antibody, cell surface receptors, receptor ligand, immunoliposome, immunotoxin, cytosolic protein, secreted protein, nuclear protein or its functional motif and a target protein, such as membrane protein, cytosolic, secreted, nuclear or chaperon protein in multiple types of cells. The **probe** is conjugated with an enzyme, **radioactive** or luminescent group, is contacted with the array of tubes to produce a stable **probe** -target complex and **formation** of the complex is detected in each tube. The array is also useful for determining a cell-type binding selectivity of an antibody, detecting differential expression of a target protein or polynucleotide in the multiplicity of cell types and for identifying a modulator of a signal transduction pathway. Differential expression of target protein in cell types derived from at least two subjects can also be detected. The method involves staining individual cell arrays comprising tubes containing cell types of the first and second subjects, respectively with antibody specific for target protein, detecting the stain in each tube of the two arrays and comparing the immunostaining **patterns** . For detecting expression of target polynucleotide ( **DNA** or **RNA** ), the arrays are contacted with nucleotide **probes** and hybridization **patterns** are compared as above (all claimed). The cell arrays are useful in forensic and parenteral identification, in disease diagnosis and phylogenetic classification.

ADVANTAGE - This technique of cell-array production simplifies the laborious and expensive procedures of culturing multiple types of cells each time when needed.

DESCRIPTION OF DRAWING(S) - The figure shows the process for preparing a cell array.

pp; 54 DwgNo 1/3

Title Terms: PREPARATION; CELL; ARRAY; DRUG; SCREEN; DISEASE; DIAGNOSE; CLASSIFY; PARENT; FORENSIC; IDENTIFY; GENERATE; MULTIPLE; TUBE; CELL; SPECIFIC; TYPE; IMMOBILISE; LUMEN

Derwent Class: A89; B04; D16; S03

International Patent Class (Main): B01J-019/00; C12N-005/02; C12N-011/04; G01N-033/567

International Patent Class (Additional): C12M-001/00; C12M-001/34; C12N-001/04; C12N-011/08; C12N-011/12; C12N-015/09; C12Q-001/68; G01N-001/30; G01N-001/36; G01N-033/48; G01N-033/50; G01N-033/53; G01N-033/543; G01N-033/566; G01N-033/58; G01N-033/68; G01N-037/00

File Segment: CPI; EPI